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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,683	03/17/2004	Yoshiyuki Tsuji	250502US0X	1876
22850	7590	03/18/2009	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			O HERN, BRENT T	
			ART UNIT	PAPER NUMBER
			1794	
			NOTIFICATION DATE	DELIVERY MODE
			03/18/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/801,683	Applicant(s) TSUJI ET AL.	
	Examiner Brent T. O'Hern	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,7-13,18,19,26,28,29 and 31 is/are pending in the application.
- 4a) Of the above claim(s) 8-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,7,12,13,18,19,26,28,29 and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims

1. Claims 1-2, 4, 7-13, 18-19, 26, 28-29 and 31 are pending with claims 8-11 withdrawn.

WITHDRAWN REJECTIONS

2. All rejections of record in the Office Action mailed 17 September 2008 have been withdrawn due to Applicant's arguments in the Paper filed 21 January 2009.

NEW REJECTIONS

Claim Rejections - 35 USC § 112

3. Claims 1-2, 4, 7, 12-13, 18-19, 26, 28-29 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. The phrases "wherein at least an outer surface of the wall part of the crucible is covered with fine grooves" in claim 1, lines 6-7 and claim 7, line 6 are vague and indefinite since it is unclear whether there are a minimum of two grooves and the "covered" language means that there is not any space in between the grooves or the covered language means that there is space between the grooves that is not covered by the grooves. The "an outer space" language is interpreted as meaning that regions of the outer surface of the crucible has grooves, however, said language does not require all regions of outer surface to have grooves. If Applicant disagrees with said interpretation then Applicant shall clarify the interpretation.

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5. The phrases “wherein the fine grooves exist on more than 10%/(50%) of the outer surface of the crucible” in claim 2, line 2, claim 7, line 9, claim 29, line 2 and claim 31, line 2 are vague and indefinite since it is unclear whether said language is referring to the surface between the grooves or the total surface of the crucible. Thus, it is unclear whether a crucible surface with grooves that are uniformly distributed across 100% of the surface with the surface between the grooves being 99% of the entire surface would satisfy the limitations of the claims. If Applicant is referring to the area between the grooves then this example would not meet the limitations of the claims since grooves would only cover 1% of the surface, which is less than 10%/(50%). However, if Applicant is not referring to the area between the grooves then this example would satisfy the limitations because 100% is greater than 10%/(50%).

6. Furthermore, it is unclear whether the above noted language “the outer surface” is referring to the “an outer surface” as set forth in line 6 of independent claims 1 and 7 or is it referring to a different “entire surface” of the crucible.

Clarification and/or correction is required.

ANSWERS TO APPLICANT’S ARGUMENTS

7. All previous rejections of record have been withdrawn in view of Applicant’s arguments made of record.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent T. O'Hern whose telephone number is (571)272-0496. The examiner can normally be reached on Monday-Thursday, 9:00-6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brent T. O'Hern/
Examiner
Art Unit 1794
March 12, 2009